



Westinghouse
Hanford Company

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OSM RCRA LEVEL C DATA ASSESSMENT

DATE 10-3-90

SAMPLES/MATRIX Seq. # 4- 89-041

REVIEWED BY C.J. Simiele

Acid digest: E5048

LABORATORY 222-S

fusion prep- E5039

CASE # SSSF-241-U-110

water digest- E5033

SDG # Segment # 4-Core 5
89-041

DATA ASSESSMENT SUMMARY

BEST AVAILABLE COPY

QUALITY CONTROL CHECK	ANALYSIS	ICP	IC	TOC
1. Holding Time		X	X	X
2. Calibration		X	O	O
3. Analytical Blank		M	O	O
4. LCS		N/A	N/A	N/A
5. ICS (ICP only)		N/A	N/A	N/A
6. Matrix Spike		X	X	O
7. Duplicate Analyses		X	X	X
8.		—	—	—
9.		—	—	—
10.		—	—	—

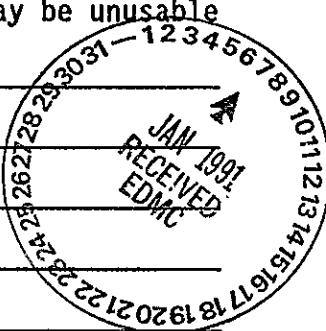
O = data had no problems

X = data qualified due to minor problems

M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSMENT: _____

NOTES: _____



- o Refer to the corresponding attachments for explanation of any problems.



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OSM RCRA LEVEL C DATA ASSESSMENT

DATE 10-3-90
REVIEWED BY C.J.Simiele
LABORATORY 222-S
CASE # SST 241-U-110
SDG # Segment #4

SAMPLES/MATRIX Sig (4) # 89-041
acid digest - F5048
fusion - F5038
water digest - F5033

DATA ASSESSMENT SUMMARY

QUALITY CONTROL CHECK	ANALYSIS	D/H (Duplicate Analyses)	% H ₂ O (only)
1. <u>-</u>			
2. <u>Duplicate Analyses</u>	<u>0</u>	<u>0</u>	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

0 = data had no problems

X = data qualified due to minor problems

M = data qualified due to major problems/some data may be unusable

OVERALL ASSESSMENT: _____

NOTES: _____

- o Refer to the corresponding attachments for explanation of any problems.

SUMMARY DATA REPORT

Tank 241-U-110
 Core 5
 Segment 4
 Customer Id. 89-041

Untreated Sample Acid Digestion Results

	Sample	Duplicate		Sample	Duplicate
pH	12.71	12.92	Aluminum	34730 ug/g R	37858 ug/g
Percent Water	38.80%	39.10%	Barium	22 ug/g	16 ug/g
			Bismuth	20942 ug/g	19470 ug/g
			Boron	LT D	LT
			Cadmium	LT	LT
			Calcium	155 ug/g J	152 ug/g
			Chromium	446 ug/g J	429 ug/g
			Copper	27 ug/g	15 ug/g
			Iron	7927 ug/g	8145 ug/g
			Lanthanum	LT J	LT
			Lead	131 ug/g J	LT
			Lithium	4 ug/g	LT
			Magnesium	103 ug/g	116 ug/g
			Manganese	1993 ug/g J	2048 ug/g
			Molybdenum	20 ug/g J	11 ug/g
			Nickel	59 ug/g J	44 ug/g
			Phosphorous	9243 ug/g	9534 ug/g
			Potassium	198 ug/g J	LT
			Silver	LT	LT
			Sodium	65496 ug/g	65413 ug/g
			Strontium	243 ug/g	245 ug/g
			Tantalum	63 ug/g J	13 ug/g
			Tin	31 ug/g J	17 ug/g
			Titanium	11 ug/g	LT
			Zinc	57 ug/g	LT
			Zirconium	44 ug/g J	LT

LT: Less Than

Total Organic Carbon/Carbonate

4710 ug/g 5030 ug/g

Samples were not acidified before analysis

Total Organic Carbon (Second analysis)

859 ug/g J 1100 ug/g

Samples were acidified before analysis

10-3-90
C.J. Simrell

RCRA LEVEL C QC

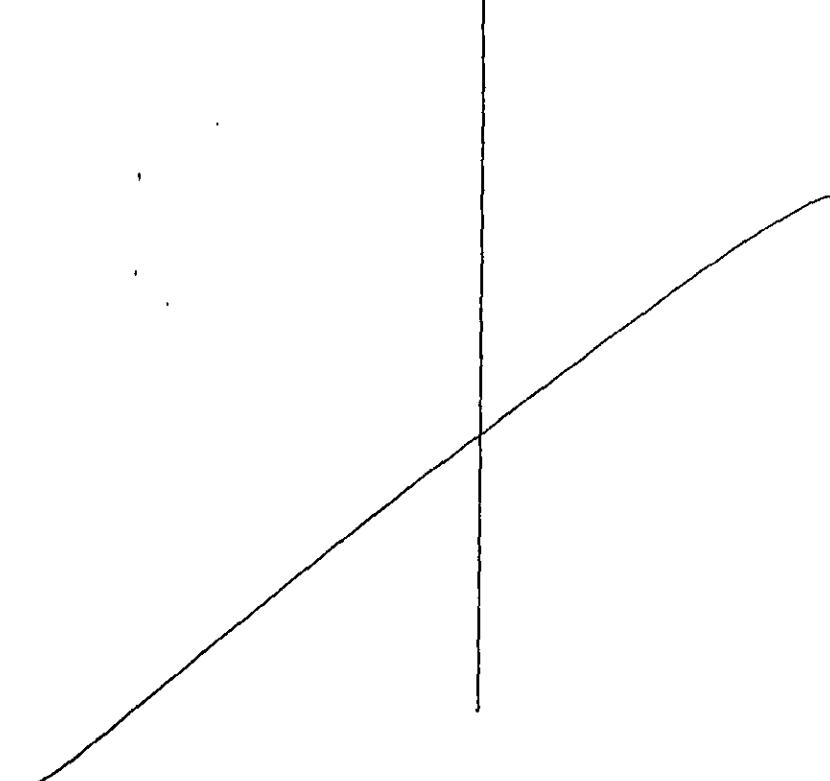
Name C.J. Simiele Date 10-3-90

QC Check: Holding Time

COMMENTS: Holding times were not met for NO₂ on T.C., the second TOC analyses, and the ICP analyses. All other holding times were met.

ACTION: None- Due to the unusual circumstances under which SST 241-U-110 samples were analyzed, analyses which did not meet specified holding times, will not be qualified.

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
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RCRA LEVEL C QC

Name C.J.Simiele

Date 10-3-90

QC Check: Calibration

COMMENTS: All initial ICP calibration within control limits. In continuing calibration standard one element outside control limits. (Mo). Three elements in acid digested standard outside control limits. (Ca, Pb).

ACTION: Qualify all associated data as per QSM guidelines

	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>		<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
	F5048	Mo	J				
		Ca	J				
		Pb	J				

RCRA LEVEL C OC

Name C.J. Simiele Date 10-3-90

QC Check: Analytical Blank

COMMENTS: No preparation. Blank analyzed with SDG.

ACTION: Qualify associated samples as per OSM guidelines

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>
F5048	Al B ₂ B ₃ B ₄ B ₅ B ₆ B ₇ B ₈ Fe P ₂ P ₃ Mg Zn Ag	R	F5048	Na Sr Ta Sn Ti Zn Zr	R

RCRA LEVEL C QC

Name C.J. Simiele

Date 10-3-90

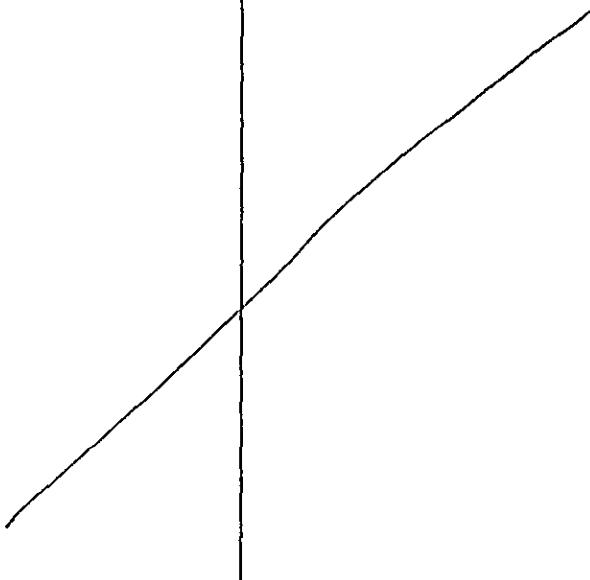
QC Check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

sample # constituent value/qual

sample # constituent value/qual



RCRA LEVEL C QC

Name C.J. Simiele

Date 10-3-90

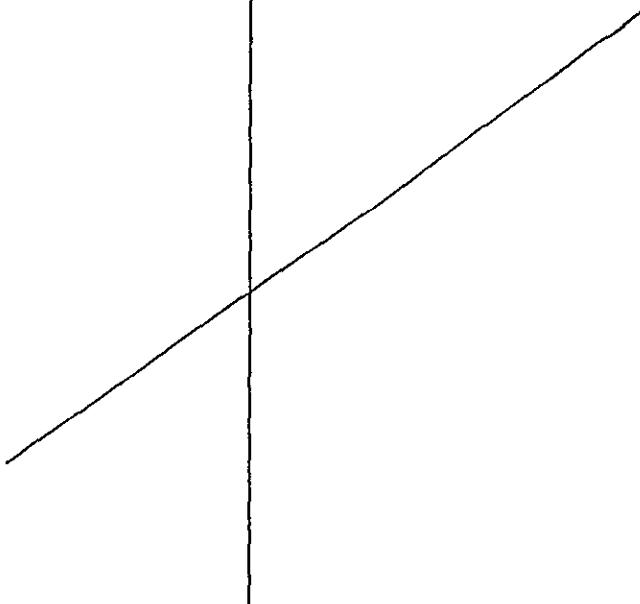
QC Check: ICS

COMMENTS: No ICS data provided with data package.

ACTION: None

sample # constituent value/qual

sample # constituent value/qual



— of —

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Matrix Spike

COMMENTS: Ten Nine elements in matrix spike
out of control limits. (B, Ca, Cr, La,
Mn, Ni, K, Ta, Sn \pm Zr)

ACTION: Qualify associated data as per
OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
RF 5048	Ca	LT			
	Cr	LT			
	La	LT			
	Mn	LT			
	Ni	LT			
	K	LT			
	Ta	LT			
	B	LT			
	Sn	LT			
	Zr	LT			

RCRA LEVEL C QC

Name C.J.Simiele Date 10-3-90

QC Check: Duplicate Analyses

COMMENTS: ICP duplicate analyses out of $\pm 20\%$

Control limits include: Ba (27.3%); Cu (44%); Pb (57%); Mo (45%); Ni (25%); Ta (79%); Sn (45%); Ti (36%); Zn (93%); & Zr (32%). *

ACTION: Qualify associated data as per OSM guidelines

sample #	constituent	value/qual	sample #	constituent	value/qual
F5048	Ba	J			
	Cu				
	Pb				
	Mo				
	Ni				
	Ta				
	Sn				
	Ti				
	Zn				
	Zr				

* LESS THAN values assumed to equal detection limit to determine ^{of} RPD.

RCRA LEVEL C QC

Name C.L.Simicq Date 10-3-90

QC Check: Calibration

COMMENTS: All initial IC calibration within control limits, one element (F) of a continuing calibration standard out of control limits.

ACTION: Qualify associated data as per OSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F5043	F	J			

RCRA LEVEL C OC

Name C.J. Simiele Date 10-3-90

QC Check: Analytical Blank

COMMENTS: All I.C. anion preparation blanks contaminant free.

ACTION: None

sample #	constituent	value/qual		sample #	constituent	value/qual
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RCRA LEVEL C QC

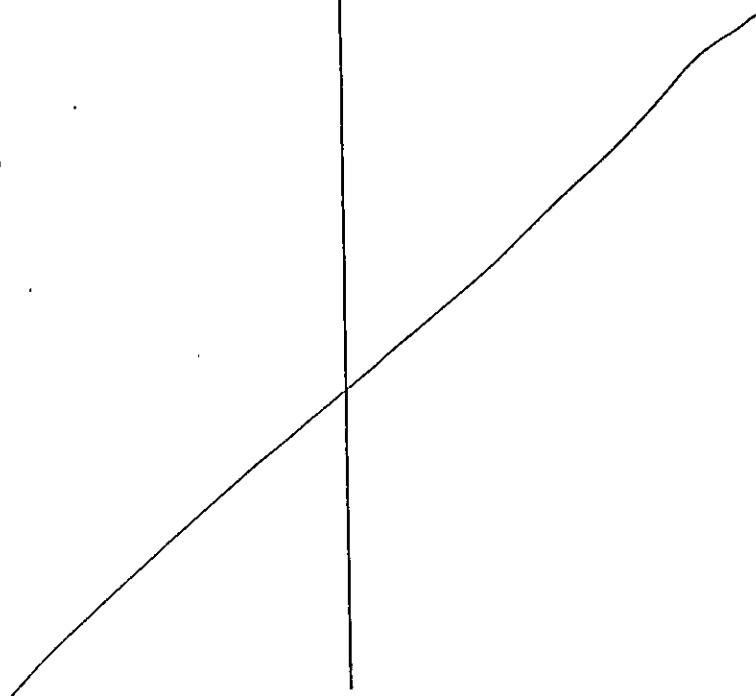
Name C.J. Simiele Date 10-3-90

QC Check: LCS

COMMENTS: No LCS data provide with
data package.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>



RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

QC Check: Matrix Spike

COMMENTS: One anion of 10 spike out of control limit. (PO₄)

ACTION: Qualify associated data as per DSM guidelines.

sample #	constituent	value/qual	sample #	constituent	value/qual
F5043	PO ₄	J			

RCRA LEVEL C QC

Name C.J.Simiele Date 10-3-90

QC Check: Duplicate Analyses

Comments: One anion duplicate result on
the IC out of control limits. (PO4)

Action: Qualify associated data as per
OSM guidelines.

sample # constituent value/qual
F5043 PO4 J

sample # constituent value/qual

RCRA LEVEL C QC

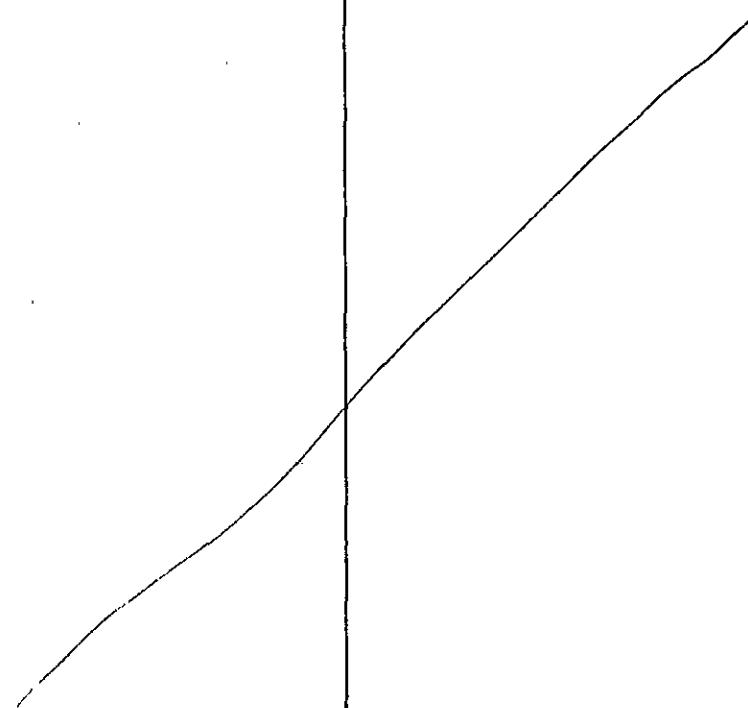
Name C.J. Simiele Date 10-3-90

QC Check: Calibration

COMMENTS: All initial and continuing calibration checks within control limits for both TOC sets.

ACTION: None

sample # constituent value/qual | sample # constituent value/qual



— of —

RCRA LEVEL C QC

Name C.J. Simiele Date 10-3-90

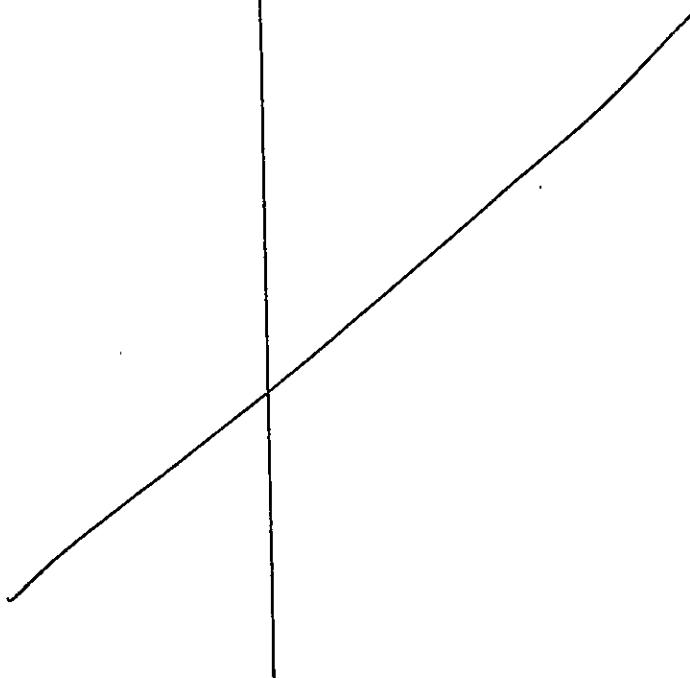
QC Check: Analytical Blank

Comments: TOC preparation blank contaminant free.

Action: None

sample # constituent value/qual

sample # constituent value/qual



— of —

RCRA LEVEL C QC

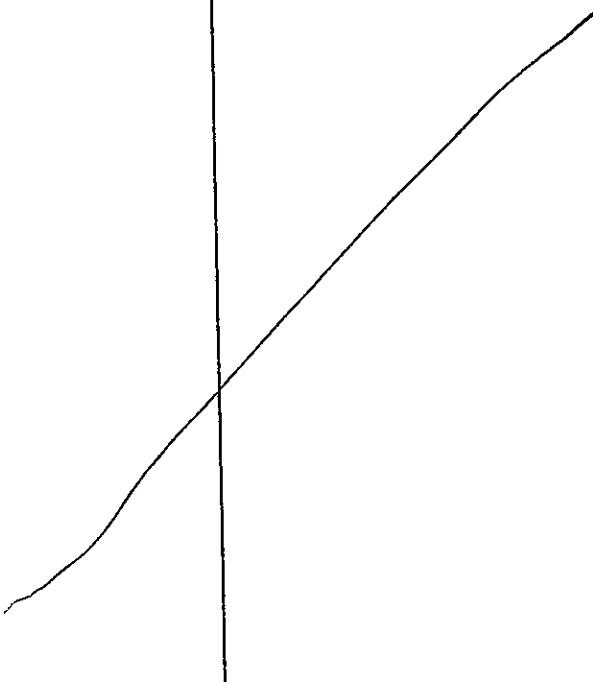
Name C.J. Simiele Date 10-3-90

QC Check: LCS

COMMENTS: No LCS data provided with data package.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>



— of —

RCRA LEVEL C QC

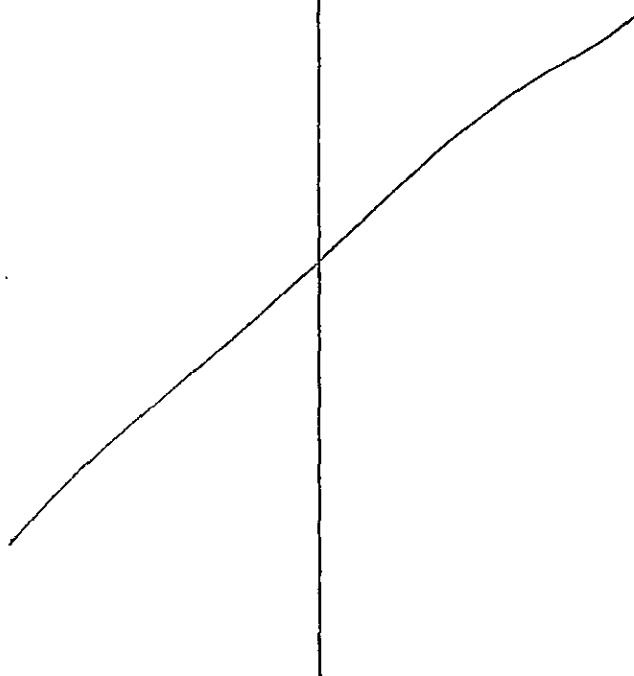
Name C.J. Simiele Date 10-3-90

QC Check: Matrix Spike

COMMENTS: Matrix spike on both TOC analyses
sets within control limits.

ACTION: None

<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>	<u>sample #</u>	<u>constituent</u>	<u>value/qual</u>



— of —

RCRA LEVEL C QC

Name C.J.Simiele Date 10-3-90

QC Check: Duplicate Analyses

COMMENTS: Duplicate analyses on first TOC
within control limits. Duplicate analyses
on second TOC out of control limits.

ACTION: Qualify associated data as per
OSM guidelines.

sample # constituent value/qual
F5033 TOC (2nd set) J

sample # constituent value/qual

RCRA LEVEL C QC

Name C.J. Simicak Date 10-3-90

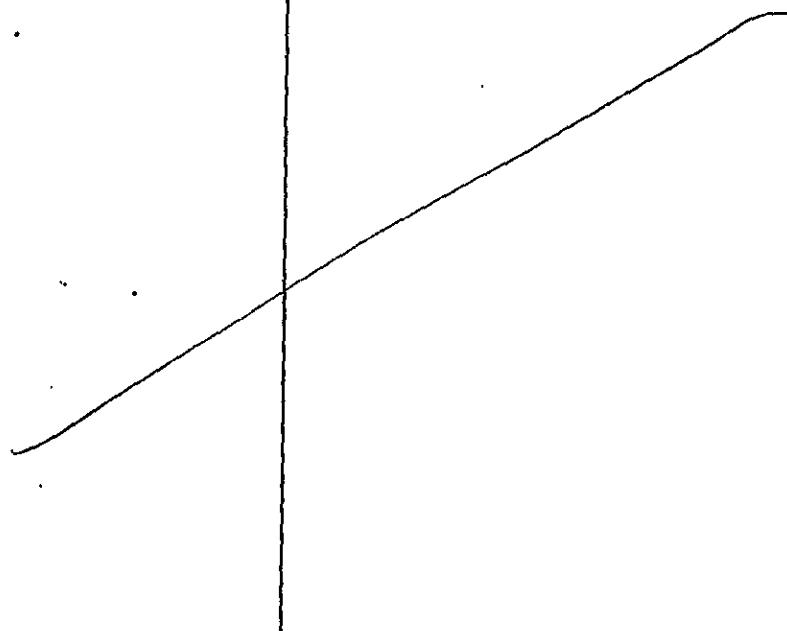
QC check: Duplicate Analysis

COMMENTS: Both pH and % Water within
 $\pm 20\%$ Control Limits.

ACTION: None

sample # constituent value/qual

sample # constituent value/qual



____ of ____